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ABSTRACT

The General Accounting Office's (GAO's) director of health care-public health issues testified before Congress regarding growing concerns about the adequacy of the health care work force and lessons learned from the experience of the National Health Service Corps (NHSC) in addressing the maldistribution of health care professionals. The following were among the key points made during the testimony: (1) recruitment and retention of adequate numbers of qualified health care workers are major concerns for many health care providers today; (2) although current data on supply and demand for many categories of health workers are limited, available evidence suggests emerging shortages in some fields (especially among nurses and nurses aides); (3) vacancy rates for health care workers in rural areas and inner cities are especially high; (4) working conditions and wages contribute to job dissatisfaction among nurses and nurses aides; (5) although demand for most health workers will continue to grow, demographic pressures may limit their supply; (6) the NHSC illustrates the challenges in addressing shortages of health professionals in certain locations; (7) better coordination of placements with waivers for J-1 visa physicians is needed; and (8) loan repayment is a better approach than scholarships. (A list of 10 related GAO reports is appended.) (MN)

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HEALTH WORKFORCE

Ensuring Adequate Supply and Distribution Remains Challenging

Statement of Janet Heinrich
Director, Health Care—Public Health Issues

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Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today as you discuss issues related to the health care workforce and the reauthorization of federal safety net programs to improve access to care for medically underserved populations. As you know, there is growing concern that many Americans will go without needed health care services because worker shortages or geographic maldistribution of certain types of health care professionals may develop.

Changes in the U.S. health care system over the past two decades have affected the environment in which a variety of health professionals and paraprofessionals provide care. For example, while hospitals traditionally were the primary providers of acute care, advances in technology, along with cost controls, have shifted much care from traditional inpatient settings to ambulatory or community-based settings, nursing facilities, and home health care settings. In addition, the transfer of less acute patients to nursing homes and community-based-care settings created a broader range of health care employment opportunities. These changes have led to concerns regarding the adequacy of the health care workforce. And while the adequacy of the health care workforce is an important issue nationwide, the distribution of available health professionals is a particularly acute issue in certain locations. These medically underserved areas, ranging from isolated rural areas to inner cities, have problems attracting and retaining health care professionals.

My testimony will discuss (1) growing concerns about the adequacy of the health care workforce and emerging shortages in some fields, particularly among nurses and nurse aides, and (2) the lessons learned from the experience of one federal program–the Department of Health and Human Services' (HHS) National Health Service Corps (NHSC)–in addressing the maldistribution of health care professionals. My comments are based on our previous work in these areas and limited follow-up work we conducted to update the findings and recommendations contained in earlier reports.[1]

In brief, while current data on supply and demand for many categories of health workers are limited, available evidence suggests emerging shortages in some fields, for example, among nurses and nurse aides. Many providers are reporting rising vacancy and turnover rates for these

[1]See Related GAO Reports.

workers, contributing to growing concerns about recruiting and retaining qualified health professionals. These concerns are likely to increase in the future as demographic pressures associated with an aging population are expected to both increase demand for health services and limit the pool of available workers such as nurses and nurse aides.

Regarding the experience of the NHSC, while the program has placed thousands of health professionals in needy communities since its establishment in 1970, our work has identified several areas for HHS and the Congress to consider in discussing NHSC reauthorization. For example, we found problems with HHS' system for identifying and measuring the need for NHSC providers. In addition, the NHSC placement process is not well coordinated with other efforts to place physicians in underserved areas and does not assist as many needy areas as possible. Finally, regarding the financing mechanism used to attract health care professionals to the NHSC, our analysis found that educational loan repayment is preferable over scholarships in most situations.

Health Workforce Issues Are A Growing Concern

Recruitment and retention of adequate numbers of qualified workers are major concerns for many health care providers today. While current data on supply and demand for many categories of health workers are limited, available evidence suggests emerging shortages in some fields, for example, among nurses and nurse aides. Many providers are reporting rising vacancy and turnover rates for these worker categories. In addition, difficult working conditions and dissatisfaction with wages have contributed to rising levels of dissatisfaction among many nurses and nurse aides. These concerns are likely to increase in the future as demographic pressures associated with an aging population are expected to both increase demand for health services and limit the pool of available workers such as nurses and nurse aides. As the baby boom generation ages, the population of persons age 65 and older is expected to double between 2000 and 2030, while the number of women age 25 to 54, who have traditionally formed the core of the nursing workforce, will remain virtually unchanged. As a result, the nation may face a caregiver shortage of different dimensions from those of the past.

Evidence Suggests Emerging Health Worker Shortages in Some Fields

Nurses and nurse aides are by far the two largest categories of health care workers, followed by physicians and pharmacists.[2] While current workforce data are not adequate to determine the magnitude of any imbalance between supply and demand with any degree of precision, evidence suggests emerging shortages of nurses and nurse aides to fill vacant positions in hospitals, nursing homes, and other health care settings. Hospitals and other providers throughout the country have reported increasing difficulty in recruiting health care workers, with national vacancy rates in hospitals as high as 21 percent for pharmacists in 2001. Rising turnover rates in some fields such as nursing and pharmacy are another challenge facing providers and are suggestive of growing dissatisfaction with wages, working environments, or both.

Data on Health Workforce Supply and Demand Are Limited

There is no consensus on the optimal number and ratio of health professionals necessary to meet the population's health care needs. Both demand and supply of health workers are influenced by many factors. For example, with respect to registered nurses (RN), demand not only depends on the care needs of the population, but also on how providers—hospitals, nursing homes, clinics, and others—decide to use nurses in delivering care. Providers have changed staffing patterns in the past, employing fewer or more nurses relative to other workers at various times. National data are not adequate to describe the nature and extent of nurse workforce shortages nor are data sufficiently sensitive or current to allow a comparison of the adequacy of nurse workforce size across states, specialties, or provider types.

With respect to pharmacists, there are also limited data available for assessing the adequacy of supply, a situation that has led to contradictory claims of a surplus of pharmacists a few years ago and a shortage at the present time. While several factors point to growing demand for pharmacy services such as the increasing number of prescriptions being filled, a greater number of pharmacy sites, and longer hours of operation, these pressures may be moderated by expanding access to alternative dispensing models such as Internet and mail-order delivery services.

[2]In 1999, there were approximately 2.2 million nurse aides, 2.2 million registered nurses, 688,000 licensed practical or vocational nurses, 313,000 physicians, and 226,000 pharmacists employed in the United States according to the Bureau of Labor Statistics.

Providers Report High Vacancy Rates for Many Health Care Workers

Recent studies suggest that hospitals and other health care providers in many areas of the country are experiencing increasing difficulty recruiting health care workers.[3] A recent 2001 national survey by the American Hospital Association reported an 11 percent vacancy rate for RNs, 18 percent for radiology technicians, and 21 percent for pharmacists.[4] Half of all hospitals reported more difficulty in recruiting pharmacists than in the previous year, and three-quarters reported greater difficulty in recruiting RNs. Urban hospitals reported slightly more difficulty in recruiting RNs than rural hospitals. However, rural hospitals reported higher vacancy rates for several other types of employees. Rural hospitals reported a 29 percent vacancy rate for pharmacists and 21 percent for radiology technologists compared to 15 percent and 16 percent respectively among urban hospitals.

A recent survey in Maryland conducted by the Association of Maryland Hospitals and Health Systems reported a statewide average RN vacancy rate for hospitals of 14.7 percent in 2000, up from 3.3 percent in 1997.[5] The Association reported that the last time vacancy rates were at this level was during the late 1980s, during the last reported nurse shortage. Also in 2000, Maryland hospitals reported a 12.4 percent vacancy rate for pharmacists, a 13.6 percent rate for laboratory technicians, and 21.0 percent for nuclear medicine technologists. These same hospitals reported taking 60 days to fill a vacant RN position in 2000 and 54 days to fill a pharmacy vacancy in 1999.

Several recent analyses illustrate concerns over the supply of nurse aides. In a 2000 study of the nurse aide workforce in Pennsylvania, staff shortages were reported by three-fourths of nursing homes and more than half of all home health care agencies.[6] Over half (53 percent) of private

[3]Caution must be used when comparing vacancy rates from different studies. While nurse vacancy rates are typically the number of budgeted full-time RN positions that are unfilled divided by the total number of budgeted full-time RN positions, not all studies identify the method used to calculate rates.

[4]American Hospital Association, *The Hospital Workforce Shortage: Immediate and Future*, (Washington, D.C.: AHA, 2001).

[5]Association of Maryland Hospitals & Health Systems, *MHA Hospital Personnel Survey 2000*, (Elkridge, MD: MHA, 2001).

[6]Joel Leon, Jonas Marainen, and John Marcotte, *Pennsylvania's Frontline Workers in Long Term Care* (Jenkintown, Pa.: Polisher Research Institute at the Philadelphia Geriatric Center, 2001).

nursing homes and 46 percent of certified home health care agencies reported staff vacancy rates higher than 10 percent. Nineteen percent of nursing homes and 25 percent of home health care agencies reported vacancy rates exceeding 20 percent. A recent survey of providers in Vermont found high vacancy rates for nurse aides, particularly in hospitals and nursing homes; as of June 2000, the vacancy rate for nurse aides in nursing homes was 16 percent, in hospitals 15 percent, and in home health care 8 percent. In a recent survey of states, officials from 42 of the 48 states responding reported that nurse aide recruitment and retention were currently major workforce issues in their states.[7] More than two-thirds of these states (30 of 42) reported that they were actively engaged in efforts to address these issues.

High Rates of Turnover Experienced in Some Fields

Rising turnover rates in many fields are another challenge facing providers and suggest growing dissatisfaction with wages, working environments, or both. According to a recent national hospital survey, rising rates of turnover have been experienced, particularly in nursing and pharmacy departments.[8] Turnover among nursing staff rose from 11.7 percent in 1998 to 26.2 percent in 2000. Among pharmacy staff, turnover rose from 14.6 percent to 21.3 percent over the same period. Nursing home and home health care industry surveys indicate that nurse turnover is an issue for them as well.[9] In 1997, an American Health Care Association (AHCA) survey of 13 nursing home chains identified a 51-percent turnover rate for RNs and licensed practical nurses (LPN).[10] A 2000 national survey of home health care agencies reported a 21-percent turnover rate for RNs.[11]

[7]North Carolina Division of Facility Services, *Comparing State Efforts to Address the Recruitment and Retention of Nurse Aide and Other Paraprofessional Aide Workers* (Raleigh, N.C.: Sept. 1999).

[8]Hospital & Healthcare Compensation Service, *Hospital Salary and Benefits Report 2000-2001* (Oakland, N.J.: Hospital & Healthcare Compensation Service, 2000).

[9]As with vacancy rates, caution should be used when comparing turnover rates from different studies. Nurse turnover rates are typically the number of nurses that have left a facility divided by the total number of nurse positions. However, there is no standard method for calculating turnover, and methods used in different studies may vary.

[10]American Health Care Association, *Facts and Trends 1999, The Nursing Facility Sourcebook* (Washington, D.C.: AHCA, 1999).

[11]Hospital & Healthcare Compensation Service, *Homecare Salary and Benefits Report 2000-2001* (Oakland, N.J.: Hospital & Healthcare Compensation Service, 2000).

Many providers also are reporting problems with retention of nurse aide staff. Annual turnover rates among aides working in nursing homes are reported to be from about 40 percent to more than 100 percent. In 1998, a survey sponsored by AHCA of 12 nursing home chains found 94-percent turnover among nurse aides.[12] A more recent national study of home health care agencies identified a 28 percent turnover rate among aides in 2000, up from 19 percent in 1994.[13]

High rates of turnover may lead to higher provider costs and quality of care problems. Direct provider costs of turnover include recruitment, selection, and training of new staff, overtime, and use of temporary agency staff to fill gaps. Indirect costs associated with turnover include an initial reduction in the efficiency of new staff and a decrease staff morale and group productivity. In nursing homes, for example, high turnover can disrupt the continuity of patient care—that is, aides may lack experience and knowledge of individual residents or clients. When turnover leads to staff shortages, nursing home residents may suffer harm because there remain fewer staff to care for the same number of residents.

Working Conditions and Wages Contribute to Job Dissatisfaction Among Nurses and Nurse Aides

Job dissatisfaction has been identified as a major factor contributing to the current problems providers report in recruiting and retaining nurses and nurse aides. Among nurses, inadequate staffing, heavy workloads, and the increased use of overtime are frequently cited as key areas of job dissatisfaction. A recent Federation of Nurses and Health Professionals (FNHP) survey found that half of the currently employed RNs surveyed had considered leaving the patient-care field for reasons other than retirement over the past 2 years; of those who considered leaving, 18 percent wanted higher wages, but 56 percent wanted a less stressful and less physically demanding job.[14] Other surveys indicate that while increased wages might encourage nurses to stay at their jobs, money is not generally cited as the primary reason for job dissatisfaction. The FNHP survey found that 55 percent of currently employed RNs were either just somewhat or not satisfied with their facility's staffing levels, while 43

[12]American Health Care Association, *Staffing of Nursing Services in Long Term Care: Present Issues and Prospects for the Future* (Washington, D.C.: AHCA, 2001).

[13]*Homecare Salary and Benefits Report, 2000-2001*, 2000.

[14]Federation of Nurses and Health Professionals, *The Nurse Shortage: Perspectives from Current Direct Care Nurses and Former Direct Care Nurses* (opinion research study conducted by Peter D. Hart Research Associates)(Washington, D.C.: 2001).

percent indicated that increased staffing would do the most to improve their jobs.

For nurse aides, low wages, few benefits, and difficult working conditions are linked to high turnover. Our analysis of national wage and employment data from the Bureau of Labor Statistics (BLS) indicates that, on average, nurse aides receive lower wages and have fewer benefits than workers generally. In 1999, the national average hourly wage for aides working in nursing homes was $8.29, compared to $9.22 for service workers and $15.29 for all workers. For aides working in home health care agencies, the average hourly wage was $8.67, and for aides working in hospitals, $8.94. Aides working in nursing homes and home health care are more than twice as likely as other workers to be receiving food stamps and Medicaid benefits, and they are much more likely to lack health insurance. One-fourth of aides in nursing homes and one-third of aides in home health care are uninsured compared to 16 percent of all workers. In addition, other studies have found that the physical demands of nurse aide work and other aspects of the environment contribute to retention problems. Nurse aide jobs are physically demanding, often requiring moving patients in and out of bed, long hours of standing and walking, and dealing with patients or residents who may be disoriented or uncooperative.

Demand for Most Health Workers Will Continue to Grow While Demographic Pressures May Limit Supply

Concern about emerging shortages may increase as the demand for health care services is expected to grow dramatically with the continued aging of the population. In most job categories, health care employment is expected to grow much faster than overall employment, which BLS projects will increase by 14.4 percent from 1998 to 2008. As shown in Table 1, total employment for personal and home care aides is expected to grow by 58 percent, with 567,000 new workers needed to meet the increased demand and replace those who leave the field. Employment of physical therapists is expected to grow by 34 percent, and employment of RNs is projected to grow by almost 22 percent, with 794,000 new RNs expected to be needed by 2008.

Table 1: Projected Employment Growth for Selected Occupations, 1998-2008

Occupation	1998 employment (in thousands)	Percent growth in employment 1998-2008	Total projected job openings, 1998-2008 (in thousands)*
All occupations	140,514	14.4	54,622
Physicians	577	21.2	212
Dentists	160	3.1	38
Registered nurses	2,079	21.7	794
Pharmacists	185	7.3	64
Physical therapists	120	34.0	59
Clinical laboratory technicians and technologists	313	17.0	93
Radiology technicians and technologists	162	20.1	55
Nurse aides, orderlies and attendants	1,367	23.8	515
Personal and home health aides	746	58.1	567

*Total projected openings are due to both growth in demand and net replacements.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Occupational Employment Projections to 2008," Monthly Labor Review, November 1999.

Demographic pressures will continue to exert significant pressure on both the supply and demand for nurses and nurse aides. A more serious shortage of nurses and nurse aides is expected in the future, as pressures are exerted on both supply and demand. The future demand for these workers is expected to increase dramatically when the baby boomers reach their 60s, 70s, and beyond. Between 2000 and 2030, the population age 65 years and older will double. During that same period the number of women age 25 to 54, who have traditionally formed the core of the nurse and nurse aide workforce, is expected to remain relatively unchanged. Unless more young people choose to go into the nursing profession, the workforce will continue to age. By 2010, approximately 40 percent of nurses will likely be older than 50 years. By 2020, the total number of full time equivalent RNs is projected to have fallen 20 percent below HRSA's projections of the number of RNs that will be required to meet demand at that time.[15]

[15]Peter I. Beurhaus, Douglas O. Staiger, and David I. Auerbach, "Implications of an Aging Registered Nurse Workforce," *JAMA, Vol. 283, No. 22 (June 14, 2000).*

NHSC Illustrates Challenges in Addressing Shortages of Health Professionals in Certain Locations

In addition to concerns about the overall supply of health care professionals, the distribution of available providers is an ongoing public health concern. Many Americans live in areas—including isolated rural areas or inner city neighborhoods—that lack a sufficient number of health care providers. The National Health Service Corps (NHSC) is one safety-net program that directly places primary care physicians and other health professionals in these medically needy areas. The NHSC offers scholarships and educational loan repayments for health care professionals who, in turn, agree to serve in communities that have a shortage of them. Since its establishment in 1970, the NHSC has placed thousands of physicians, nurse practitioners, dentists, and other health care providers in communities that report chronic shortages of health professionals. At the end of fiscal year 2000, the NHSC had 2,376 providers serving in shortage areas. Since the NHSC was last reauthorized in 1990, funding for its scholarship and loan repayment programs has increased nearly 8-fold, from about $11 million in 1990 to around $84 million in 2001.[16]

Some have proposed expanding the NHSC or developing similar programs to include additional health care disciplines, such as nurses, pharmacists, and medical laboratory personnel. In considering such possibilities, HHS and the Congress may want to consider our work that has identified several ways in which the NHSC could be improved. These include how the NHSC identifies the need for providers and how it measures that need, how the NHSC placements are coordinated with other programs and with its own placements, and which financing mechanism—scholarships or loan repayments—is a better approach to attract providers to those areas.

Current System for Identifying Need is Inadequate

Over the past 6 years, we have identified numerous problems with the way HHS decides whether an area is a health professional shortage area (HPSA), a designation required for a NHSC placement.[17] In addition to identifying problems with the timeliness and quality of the data used, we

[16]In addition to funding for scholarship and loan repayment awards, the NHSC receives funding for support of its providers and operations. In fiscal year 2001, this field budget was about $41 million.

[17]Only areas designated as a HPSA may apply for NHSC providers. Currently, HHS considers a HPSA generally to be a location or area with less than one primary care physician for every 3,500 persons. As of June 30, 2001, HHS identified 2,968 primary care HPSAs. To eliminate these HPSA designations, HHS identified a need of over 6,000 full-time physicians. HHS has different criteria for dental and mental health HPSAs.

found that HHS' current approach does not count some providers already working in the shortage area.[18] For example, it does not count nonphysicians providing primary care, such as nurse practitioners, and it does not count NHSC providers already practicing there. As a result, the current HPSA system tends to overstate the need for more providers, leading us to question the system's ability to assist HHS in identifying the universe of need and in prioritizing areas.

Recognizing the flaws in the current system, HHS has been working on ways to improve the designation of HPSAs, but the problems have not yet been resolved. After studying the changes needed to improve the HPSA system for nearly a decade, HHS published a proposed rule in the Federal Register in September 1998. The proposed rule generated a large volume of comments and a high level of concern about its potential impact. In June 1999, HHS announced that it would conduct further analyses before proceeding. HHS continues to work on a revised shortage area designation methodology; however, as of July 2001, it did not have a firm date for publishing the proposed new regulations.

The controversy surrounding proposed modifications to the HPSA designation system may be due, in large part, to its use by other programs. Originally, it was only used to identify an area as one that could request a provider from the NHSC. Today many federal and state programs—including efforts unaffiliated with HHS—use the HPSA designation in considering program eligibility. These areas want to get and retain the HPSA designation in order to be eligible for such other programs as the Rural Health Clinic program or a 10 percent bonus on Medicare payments for physicians and other providers.

Better Coordination of Placements With Waivers for J-1 Visa Physicians Is Needed

The NHSC needs to coordinate its placements with other efforts to attract physicians to needy areas. There are not enough providers to fill all of the vacancies approved for NHSC providers. As a result, underserved communities are frequently turning to another method of obtaining physicians—attracting non-U.S. citizens who have just completed their graduate medical education in the United States.[19] These physicians

[18]See *Health Care Shortage Areas: Designations Not a Useful Tool for Directing Resources to the Underserved* (GAO/HEHS-95-200, Sept. 8, 1995).

[19]See *Foreign Physicians: Exchange Visitor Program Becoming Major Route to Practicing in U.S. Underserved Areas* (GAO/HEHS-97-26, Dec. 30, 1996).

generally enter the United States under an exchange visitor program, and their visas, called J-1 visas, require them to leave the country when their medical training is done. However, the requirement to leave can be waived if a federal agency or state requests it. A waiver is usually accompanied by a requirement that the physician practice for a specified period in an underserved area. In fiscal year 1999, nearly 40 states requested such waivers. They are joined by several federal agencies—particularly the Department of Agriculture, which wants physicians to practice in rural areas, and the Appalachian Regional Commission, which wants to fill physician needs in Appalachia.

Waiver placements have become so numerous that they have outnumbered the placements of NHSC physicians. In September 1999, over 2,000 physicians had waivers and were practicing in or contracted to practice in underserved areas, compared with 1,356 NHSC physicians. In 1999, the number of waiver physicians was large enough to satisfy over one-fourth of the physicians needed to eliminate HPSA designations nationwide. Our follow-up work in 2001 with the federal agencies requesting the waivers and 10 states indicates that these waivers are still frequently used to attract physicians to underserved areas.

Although coordinating NHSC placements and waiver placements has the obvious advantage of addressing the needs of as many underserved locations as possible, this coordination has not occurred. In fact, this sizeable domestic placement effort—using waiver physicians to address medical underservice—is rudderless. Even among those states and agencies using the waiver approach, no federal agency has responsibility for ensuring that placement efforts are coordinated.[20] The Administration has recently stated that HHS will enhance coordination between the NHSC and the use of waiver physicians; however HHS does not have a system to take waiver physician placements into account in determining where to put NHSC physicians. While some informal coordination may occur, it remains a fragmented effort with no overall program accountability. As a result, some areas have ended up with more than enough physicians to remove their shortage designations, while needs in other areas have gone unfilled.

[20]Historically, HHS has not supported the waiver approach as a sound way to address underservice needs in the United States. While HHS is considering the issue, the agency still takes the position that physicians should return home after completing their medical training to make their knowledge and skills available to their home countries.

As the Congress considers reauthorizing the NHSC, it also has the opportunity to address these issues. We believe that the prospects for coordination would be enhanced through congressional direction in two areas. The first is whether waivers should be included as part of an overall federal strategy for addressing underservice. This should include determining the size of the waiver program and establishing how it should be coordinated with other federal programs. The second—applicable if the Congress decides that waivers should be a part of the federal strategy—is designating leadership responsibility for managing the use of waivers as a distinct program.

Better Placement Process is Needed

While congressional action could foster a coordinated federal strategy for placement of J-1 waiver physicians, our work has also shown that congressional action could help ensure that NHSC providers assist as many needy areas as possible. We previously reported that at least 22 percent of shortage areas receiving NHSC providers in 1993 received more NHSC providers than needed to lift their provider-to-population ratio to the point at which their HPSA designation could be removed, while 65 percent of shortage areas with NHSC-approved vacancies did not receive any providers at all.[21] Of these latter locations, 143 had unsuccessfully requested a NHSC provider for 3 years or more.[22] In response to our recommendations, the NHSC has subsequently made improvements in its procedures and has substantially cut the number of HPSAs not receiving providers. However, these procedures still allow some HPSAs to receive more than enough providers to remove their shortage designation while others go without.

NHSC officials have said that in making placements, they need to weigh not only assisting as many shortage areas as possible, but also factors—such as referral networks, office space, and salary and benefit packages—that can affect the chance that a provider might stay beyond the period of obligated service. Since the practice sites on the NHSC vacancy list had to

[21]To calculate oversupply, we counted physicians as one full-time provider and nonphysicians (nurse practitioners, nurse midwives, or physician assistants) as one-half a full-time provider. If only physician placements are counted, 6 percent of these shortage areas would still be identified as oversupplied. We consider these estimates of oversupply to be conservative because our analysis does not include NHSC providers placed in prior years who were still in service during vacancy year 1993.

[22]See *National Health Service Corps: Opportunities to Stretch Scarce Dollars and Improve Provider Placement* (GAO/HEHS-96-28, Nov. 24, 1995).

meet NHSC requirements, including requirements for referral networks and salary and benefits packages, such factors should not be an issue for those practice locations. And while we agree that retention is a laudable goal, the impact of the NHSC's current practice is unknown, since the NHSC does not routinely track how long NHSC providers are retained at their sites after completing their service obligations. The Congress may want to consider clarifying the extent to which the program should try to meet the minimum needs of as many shortage areas as possible, and the extent to which additional placements should be allowed in an effort to encourage provider retention.

Loan Repayment Is a Better Approach than Scholarships

Another issue that is fundamental to attracting health care professionals to the NHSC is the allocation of funds between scholarships and educational loan repayments. Under the NHSC scholarship program, students are recruited before or during their health professions training—generally several years before they begin their service obligation. By contrast, under the NHSC loan repayment program, providers are recruited at the time or after they complete their training. The scholarship program provides a set amount of aid per year while in school, while the loan repayment program repays a set amount of student debt for each year of service provided. Under the Public Health Service Act, at least 40 percent of the available funding must be for scholarships.

We looked at which financing mechanism works better and found that, for several reasons, the loan repayment program is the better approach in most situations.[23]

- The loan repayment program costs less. On average, each year of service by a physician under the scholarship program costs the federal government over $43,000 compared with less than $25,000 under loan repayment.[24] A major reason for the difference is the time value of money. Because 7 or more years can elapse between the time that a physician receives a scholarship and the time that the physician begins to practice in an underserved area, the federal government is making an investment for a commitment for service in the future. In the loan repayment program, however, the federal government does not pay until after the service has

[23]See GAO/HEHS-96-28.

[24]Amounts are in 1999 dollars. This cost analysis is based on new scholarship and new federal loan repayment awards made in fiscal year 1999.

begun. The difference in average cost per year of service could increase in the future as a result of a recent change in tax law.[25]

- Loan repayment recipients are more likely to complete their service obligations. This is not surprising when one considers that scholarship recipients enter into their contracts up to 7 or more years before beginning their service obligation, during which time their professional interests and personal circumstances may change. Twelve percent of scholarship recipients between 1980 and 1999 breached their contract to serve,[26] compared to about 3 percent of loan repayment recipients since that program began.
- Loan repayment recipients are more likely to continue practicing in the underserved community after completing their obligation. How long providers remain at their sites after fulfilling their obligation is not fully clear, because the NHSC does not have a long-term tracking system in place. However, we analyzed data for calendar years 1991 through 1993 and found that 48 percent of loan repayment recipients were still at the same site 1 year after fulfilling their obligation, compared to 27 percent for scholarship recipients. Again, this is not surprising. Because loan repayment recipients do not commit to service until after they have completed training, they are more likely to know what they want to do and where they want to live or practice at the time they make the commitment.

These reasons support applying a higher percentage of NHSC funding to loan repayment. The Congress may want to consider eliminating the current requirement that scholarships receive at least 40 percent of the funding. Besides being generally more cost-effective, the loan repayment program allows the NHSC to respond more quickly to changing needs. If demand suddenly increases for a certain type of health professional, the NHSC can recruit graduates right away through loan repayments. By contrast, giving a scholarship means waiting for years for the person to graduate.

[25]In analyzing the net cost differences, we took into account the federal income tax liability associated with scholarship and loan repayment awards. In essence, loan repayment awards are increased to provide for the resulting increased federal tax liability; scholarship awards are not. However, as a result of the Economic Growth and Tax Relief Reconciliation Act of 2001 (P.L. 107-16, Sec. 413), beginning January 1, 2002, scholarship payments of tuition, fees, and other reasonable educational costs will not be subject to federal income tax. As a result, the net cost to the federal government of a year of service under the NHSC scholarship program will increase.

[26]This includes scholarship recipients who defaulted and paid the default penalty, those who defaulted and subsequently completed or are serving their obligation, and those who defaulted and have not begun service or payback.

This is not to say that scholarships should be eliminated. One reason to keep them is that they can potentially do a better job of putting people in sites with the greatest need because scholarship recipients have less latitude in where they can fulfill their service obligation. However, our work indicates that this advantage has not been realized in practice. For NHSC providers beginning practice in 1993-1994, we found no significant difference between scholarship and loan payment recipients in the priority that NHSC assigned to their service locations. This suggests that the scholarship program should be tightened so that it focuses on those areas with critical needs that cannot be met through loan repayment. In this regard, the Congress may want to consider reducing the number of sites that scholarship recipients can choose from, so that the focus of scholarships is clearly on the neediest sites.[27] While placing greater restrictions on service locations could potentially reduce interest in the scholarship program, the program currently has more than six applicants for every scholarship—suggesting that the interest level is high enough to allow for some tightening in the program's conditions. If that approach should fail, additional incentives to get providers to the neediest areas might need to be explored.

Concluding Observations

Providers' current difficulty recruiting and retaining health care professionals such as nurses and others could worsen as demand for these workers increases in the future. Current high levels of job dissatisfaction among nurses and nurse aides may also play a crucial role in determining the extent of current and future nursing shortages. Efforts undertaken to improve the workplace environment may both reduce the likelihood of nurses and nurse aides leaving the field and encourage more young people to enter the nursing profession. Nonetheless, demographic forces will continue to widen the gap between the number of people needing care and the nursing staff available to provide care. As a result, the nation will face a caregiver shortage of different dimensions from shortages of the past. More detailed data are needed, however, to delineate the extent and nature of nurse and nurse aide shortages to assist in planning and targeting corrective efforts.

[27]The law provides for three vacancies for each scholar in a given discipline and specialty, up to a maximum of 500 vacancies. For example, if there are 10 pediatricians available for service, the NHSC would provide a list of 30 eligible vacancies for that group if there were 500 or fewer vacancies in total.

Regarding the NHSC, addressing needed program improvements would be beneficial. In particular, better coordination of NHSC placements with waivers for J-1 visa physicians could help more needy areas. In addition, addressing shortfalls in HHS systems for identifying underservice is long overdue. We believe HHS needs to gather more consistent and reliable information on the changing needs for services in underserved communities. Until then, determining whether federal resources are appropriately targeted to communities of greatest need and measuring their impact will remain problematic.

Mr. Chairman, this concludes my prepared statement. I would be pleased to respond to any questions you or members of the Subcommittee may have.

GAO Contacts and Acknowledgements

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Related GAO Reports

Nursing Workforce: Emerging Nurse Shortages Due to Multiple Factors (GAO-01-944, July 10, 2001)

Nursing Workforce: Multiple Factors Create Nurse Recruitment and Retention Problems (GAO-01-912T, June 27, 2001)

Nursing Workforce: Recruitment and Retention of Nurses and Nurse Aides Is a Growing Concern (GAO-01-750T, May 17, 2001)

Health Care Access: Programs for Underserved Populations Could Be Improved (GAO/T-HEHS-00-81, Mar. 23, 2000)

Community Health Centers: Adapting to Changing Health Care Environment Key to Continued Success (GAO/HEHS-00-39, Mar. 10, 2000)

Physician Shortage Areas: Medicare Incentive Payments Not an Effective Approach to Improve Access (GAO/HEHS-99-36, Feb. 26, 1999)

Health Care Access: Opportunities to Target Programs and Improve Accountability (GAO/T-HEHS-97-204, Sept. 11, 1997)

Foreign Physicians: Exchange Visitor Program Becoming Major Route to Practicing in U.S. Underserved Areas (GAO/HEHS-97-26, Dec. 30, 1996)

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